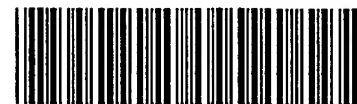# RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _10/532,464_
Source: _IFWP_
Date Processed by STIC: _4/14/06_

ENTERED

RAW SEQUENCE LISTING   DATE: 04/14/2006
PATENT APPLICATION: US/10/532,464   TIME: 11:26:38

Input Set : **F:\RUCC0064.ST25.txt**
Output Set: **N:\CRF4\04142006\J532464.raw**

```
   3 <110> APPLICANT: Havkin-Frenkel, Daphna
   4        Zylstra, Gerben J.
   5        Frenkel, Chaim
   6        Belanger, Faith
   8 <120> TITLE OF INVENTION: PRODUCTION OF VANILLIN IN MICROBIAL CELLS
  10 <130> FILE REFERENCE: RUCC-0064
C-->12 <140> CURRENT APPLICATION NUMBER: US/10/532,464
C-->12 <141> CURRENT FILING DATE: 2005-04-22
  12 <150> PRIOR APPLICATION NUMBER: US 60/412,649
  13 <151> PRIOR FILING DATE: 2002-10-23
  15 <150> PRIOR APPLICATION NUMBER: PCT/US2003/034011
  16 <151> PRIOR FILING DATE: 2003-10-23
  18 <160> NUMBER OF SEQ ID NOS: 2
  20 <170> SOFTWARE: PatentIn version 3.3
  22 <210> SEQ ID NO: 1
  23 <211> LENGTH: 1219
  24 <212> TYPE: DNA
  25 <213> ORGANISM: Vanilla planifolia
  27 <400> SEQUENCE: 1
  28 gaaatggcta catgggtgga gcaccaacag cagcaaaatg gatccaagga cgtggacgag      60
  30 gaggcgtgca tgtacgccat gcagttgtcg agcatggtcg tcctcccgat gacgcttagg     120
  32 gtagccgtcg agctcggcat actcgaacaa atccaggccg ggggcccaga ttcgtacctt     180
  34 actgccgagg atttggcggc gaggctcggc aactccaacc ccttagctcc ggtcatgatc     240
  36 gagcggatcc tgcgcctgct caccagctac tccatcctta acttcaccga caccgtcgac     300
  38 ggggagggta ggaccgtccg gagctacggc gcggcgcatg tctgcaagta cctgactccc     360
  40 aaccaggacg gcgtctccat ggcgcctctc gtcctcatga acacggataa ggtccttatg     420
  42 gagagctggt accacatgaa ggatgcagtg acaaatggtg gaataccatt caatctagca     480
  44 tatgggatga cagcttttga gtatcatggg aaagatctaa ggtttaataa ggtgttcaac     540
  46 gagggcatga agaacaactc gatcattata acgaagaaga ttttagagag atacaaaagg     600
  48 tttgaagatg tcaatgtttt aattgatgtt ggtggtggaa ttggtggaac tatcagtatg     660
  50 attactgcaa agtatccaca tatacatggg attaattttg accttcctca tgttgtttct     720
  52 gaagctccac ctttccaagg ggtagaacat gtcggtggaa acatgtttga aagtgtcccc     780
  54 attggtgatg caatcttcat aaagtggatt cttcatgatt ggagtgatga gcattgtttg     840
  56 aagctcctaa gaaattgtgc aaaatcttta cctgacaaag gaaaagtcat agttgtggaa     900
  58 tgcattcttc ccgatgcacc tttggtgacg ccagaggctg aaggtgtctt tcatttggac     960
  60 atgataatgt tggctcacaa tcctggggga aaggagagaa caaagaaaga gtttaaagaa    1020
  62 ttggctatgc tatctggttt ctctaatttc aaggcacttt ttagttatgc taatgtttgg    1080
  64 gtcatggaat tcaacaaata gtaatcttga aactccatat tgtgtggcta atttggatgc    1140
  66 tattttcaca tgcaaggatg tggtgtctct tattatatga atgtatgcat tatttttctt    1200
  68 aaaaaaaaaa aaaaaaaa                                                  1219
  71 <210> SEQ ID NO: 2
  72 <211> LENGTH: 365
  73 <212> TYPE: PRT
```

RAW SEQUENCE LISTING   DATE: 04/14/2006
PATENT APPLICATION: US/10/532,464   TIME: 11:26:38

Input Set : **F:\RUCC0064.ST25.txt**
Output Set: **N:\CRF4\04142006\J532464.raw**

```
74 <213> ORGANISM: Vanilla planifolia
76 <400> SEQUENCE: 2
78 Met Ala Thr Trp Val Glu His Gln Gln Gln Gln Asn Gly Ser Lys Asp
79 1               5                  10                  15
82 Val Asp Glu Glu Ala Cys Met Tyr Ala Met Gln Leu Ser Ser Met Val
83             20                  25                  30
86 Val Leu Pro Met Thr Leu Arg Val Ala Val Glu Leu Gly Ile Leu Glu
87         35                  40                  45
90 Gln Ile Gln Ala Gly Gly Pro Asp Ser Tyr Leu Thr Ala Glu Asp Leu
91     50                  55                  60
94 Ala Ala Arg Leu Gly Asn Ser Asn Pro Leu Ala Pro Val Met Ile Glu
95 65                  70                  75                  80
98 Arg Ile Leu Arg Leu Leu Thr Ser Tyr Ser Ile Leu Asn Phe Thr Asp
99                 85                  90                  95
102 Thr Val Asp Gly Glu Gly Arg Thr Val Arg Ser Tyr Gly Ala Ala His
103             100                 105                 110
106 Val Cys Lys Tyr Leu Thr Pro Asn Gln Asp Gly Val Ser Met Ala Pro
107         115                 120                 125
110 Leu Val Leu Met Asn Thr Asp Lys Val Leu Met Glu Ser Trp Tyr His
111     130                 135                 140
114 Met Lys Asp Ala Val Thr Asn Gly Gly Ile Pro Phe Asn Leu Ala Tyr
115 145             150                 155                 160
118 Gly Met Thr Ala Phe Glu Tyr His Gly Lys Asp Leu Arg Phe Asn Lys
119             165                 170                 175
122 Val Phe Asn Glu Gly Met Lys Asn Asn Ser Ile Ile Ile Thr Lys Lys
123             180                 185                 190
126 Ile Leu Glu Arg Tyr Lys Arg Phe Glu Asp Val Asn Val Leu Ile Asp
127         195                 200                 205
130 Val Gly Gly Gly Ile Gly Gly Thr Ile Ser Met Ile Thr Ala Lys Tyr
131     210                 215                 220
134 Pro His Ile His Gly Ile Asn Phe Asp Leu Pro His Val Val Ser Glu
135 225             230                 235                 240
138 Ala Pro Pro Phe Gln Gly Val Glu His Val Gly Gly Asn Met Phe Glu
139             245                 250                 255
142 Ser Val Pro Ile Gly Asp Ala Ile Phe Ile Lys Trp Ile Leu His Asp
143         260                 265                 270
146 Trp Ser Asp Glu His Cys Leu Lys Leu Leu Arg Asn Cys Ala Lys Ser
147         275                 280                 285
150 Leu Pro Asp Lys Gly Lys Val Ile Val Val Glu Cys Ile Leu Pro Asp
151     290                 295                 300
154 Ala Pro Leu Val Thr Pro Glu Ala Glu Gly Val Phe His Leu Asp Met
155 305             310                 315                 320
158 Ile Met Leu Ala His Asn Pro Gly Gly Lys Glu Arg Thr Lys Lys Glu
159             325                 330                 335
162 Phe Lys Glu Leu Ala Met Leu Ser Gly Phe Ser Asn Phe Lys Ala Leu
163             340                 345                 350
166 Phe Ser Tyr Ala Asn Val Trp Val Met Glu Phe Asn Lys
167         355                 360                 365
```

VERIFICATION SUMMARY   DATE: 04/14/2006
PATENT APPLICATION: **US/10/532,464**   TIME: 11:26:39

Input Set : **F:\RUCC0064.ST25.txt**
Output Set: **N:\CRF4\04142006\J532464.raw**

L:12 M:270 C: Current Application Number differs, Replaced Current Application No
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date